DATSIZE - Size of Buffer for Local Data

This Natural profile parameter is for mainframes only.

With this parameter you can set the minimum and/or the maximum size of the DATSIZE buffer: DATSIZE=(*min*,*max*). This enables you to limit the DATSIZE buffer space that can be obtained by an application.

Possible settings	min 10 - 1024	Buffer size in KB. If the specified maximum setting is exceeded, the application is terminated and a Natural runtime error 900 (Storage overflow while assigning data area) is output. If no maximum or zero is specified, the buffer size will be increased as required and is only limited by the storage thread or region size.
	max 10 - 1024, or 0	
Default setting	32,0	
Dynamic specification	YES	
Specification within session	NO	

Examples:

1. If you want to set only a minimum setting of 64 KB and no upper limit, specify:
   `DATSIZE=(64,0)`
   or simply `DATSIZE=64`
2. If you want to set only a maximum setting of 512 KB, while using the default setting or leaving the minimum setting as profiled in the NATPARM parameter module, specify:
   `DATSIZE=(,512)`
3. If you want to set a minimum setting of 96 KB and a maximum setting of 128 KB, specify:
   `DATSIZE=(96,128)`

Function of the DATSIZE Buffer

At execution time, the DATSIZE buffer holds the local data used by the Natural main program being executed and the local data of all subordinate objects (except FETCHed programs) invoked by this program.

When you use Natural in a development environment, the minimum DATSIZE required is the default setting (that is, 32 KB). A smaller DATSIZE is only possible when using Natural as a runtime-only environment without any Natural utilities being available.

Calculating the DATSIZE Requirement

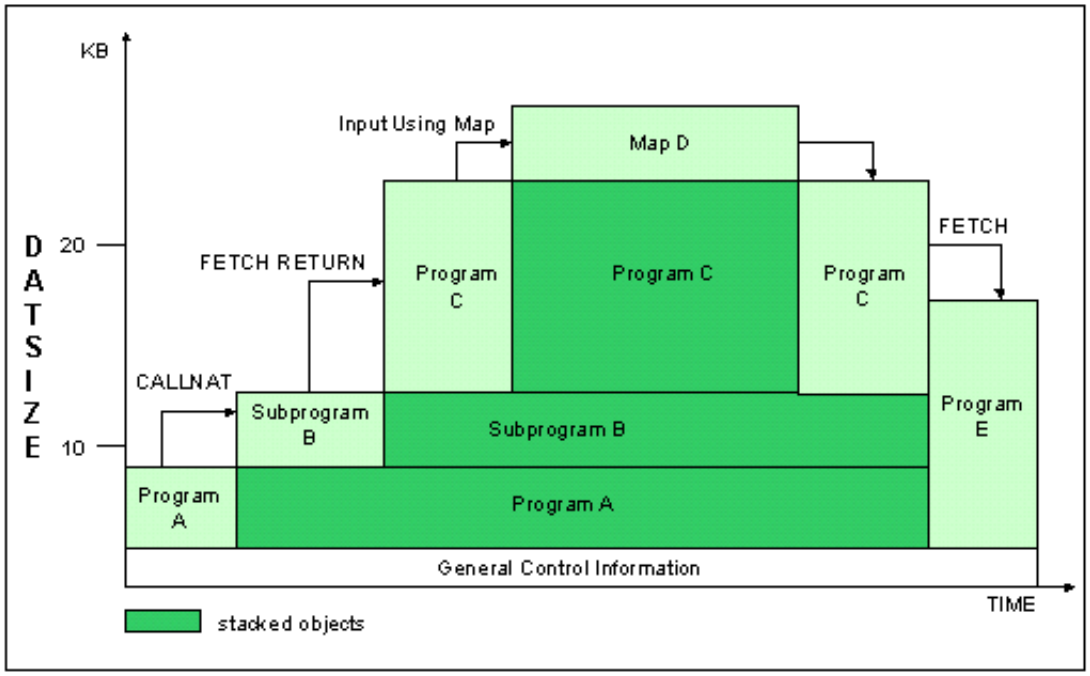
The actual DATSIZE requirement can be calculated as follows (refer to the illustration below):

If another object is invoked by the main program, the local data of this object are also held in the DATSIZE buffer.

If other objects are invoked from the invoked object (with a CALLNAT, PERFORM, FETCH RETURN, INPUT USING MAP statement, a helproutine/helpmap being invoked), their local data are also held in the DATSIZE buffer; the local data of an invoked object is held in the DATSIZE buffer until control is returned from the invoked object to the invoking object.

If another main program is invoked with a FETCH statement, the local data of all previously invoked objects are deleted from the DATSIZE buffer and the local data of the FETCHed program are held in the DATSIZE.

In addition, an amount of approximately 128 bytes of general control information for execution are held in the DATSIZE buffer, plus approximately 128 bytes of control information for each object whose local data are being held in the DATSIZE buffer. This is illustrated in the figure below.



The **system command** LIST provides an option to display directory information about an object. This information includes the object's DATSIZE storage requirement (not including the control information).

